Electronic Version
Stylesheet Version v1.1.1

[LIGHT SCATTERING EUVL MASK]

Abstract

A light scattering EUVL mask and a method of forming the same comprises depositing a crystalline silicon layer over an ultra low expansion substrate, depositing a hardmask over the crystalline silicon layer, patterning the hardmask; etching the crystalline silicon layer, removing the hardmask, and depositing a Mo/Si layer over the crystalline silicon layer, wherein etched regions of the crystalline silicon layer comprise uneven surfaces in the etched regions. The method further comprises depositing a photoresist mask over the hardmask, creating a pattern in the photoresist mask, and transferring the pattern to the hardmask. The Mo/Si layer comprises uneven surfaces conformal with the sloped surfaces of the crystalline silicon layer, wherein the sloped surfaces of the Mo/Si layer may be configured as roughened, jagged, sloped, or curved surfaces, wherein the uneven surfaces deflect incoming extreme ultraviolet radiation waves to avoid collection by exposure optics and prevent printing onto a semiconductor wafer.